

# ES&H manual

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## Environment, Safety, and Health

### Volume I

#### Part 1: Introduction to the ES&H Manual and ES&H Policies

## 1.1 Introduction to the Environmental, Safety, and Health Manual

(Formerly C51)

Recommended for approval by the ES&H Working Group

Approved by: Robert W. Kuckuck  
Deputy Director for Operations

New document or new requirements

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## 1.1

### Introduction to the *ES&H Manual*\*

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\* Minor revision

## 1.1

### Introduction to the *ES&H Manual*

## 1.0 What Is The *ES&H Manual*

The *Environment, Safety & Health (ES&H) Manual* is a compilation of ES&H-related requirements and policy information and replaces the *Health & Safety Manual*, the *Environmental Compliance Manual*, the *Quality Assurance Program*, and other related institutional documents. The requirements in the *ES&H Manual* are based on the Work Smart Standards (WSS)<sup>†</sup> identified for the specific work and associated hazards and LLNL best practices that management has determined are requirements. The WSS set was derived from statutes, regulations, DOE Orders, and national and internally developed consensus standards. The WSS set is part of the Contract 48 agreement between the University of California (UC)/LLNL, and DOE. The *ES&H Manual* also describes the implementation of the ES&H management commitments made in the Laboratory's *Integrated Safety Management System Description* (UCRL-AR-132791). Adherence to the requirements and processes described in the *ES&H Manual* ensures that safety documents across the Laboratory are developed in a consistent manner. This is particularly important in the development of Safety Analysis Reports and Technical Safety Requirements for nuclear facilities.

## 2.0 How to Use the *ES&H Manual*

The Manual is to be used by first-line supervisors, work planners, management and staff, and others to integrate ES&H requirements into Laboratory work activities. It also serves as a reference to ES&H professionals in providing consistent ES&H guidance for Laboratory work.

Individuals responsible for LLNL work activities must ensure that the hazards associated with these activities are analyzed and controlled in accordance with the requirements in the Manual. Document 2.2, "Managing ES&H for LLNL Work," in the *ES&H Manual*, contains a detailed description of work planning and provides a good place to begin for individuals who may be unfamiliar with the process.

In instances where the ES&H requirements for a work activity are not covered in the Manual, workers should contact their ES&H Team. The ES&H Teams or other subject-matter experts (usually health, safety, and environmental professionals, or professionals

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<sup>†</sup> Work Smart Standards (WSS) have been identified by LLNL and DOE as the set of statutes, regulations, DOE Orders, and national and internally developed consensus standards that are necessary and sufficient to performing LLNL's work safely while simultaneously protecting the environment. The approved set of WSS is contained in the UC/DOE Contract.

in the Electronics, Mechanical, or Plant Engineering Departments) will help in determining the requirements that apply to the specific work activity.

The *ES&H Manual* contains the majority of the requirements applicable to Laboratory activities. Requirements *are denoted by the word "shall"*; LLNL best practices and other recommended guidance that are not specified as requirements are denoted by the word "should." Where a requirement(s) is applicable only to a small subset of activities, or where a requirement(s) is extensive and complex, the *ES&H Manual* may refer back to the original WSS for more detailed information.

The official version of the Manual is maintained in electronic form and is available at

[http://www-r.llnl.gov/es\\_and\\_h/esh-manual.html](http://www-r.llnl.gov/es_and_h/esh-manual.html)

### 3.0 The *ES&H Manual's* Content

The *ES&H Manual* consists of six volumes:

- Volume I, "ES&H Management"
- Volume II, "Health and Safety —Controls and Hazards"
- Volume III, "Environment —Controls and Hazards"
- Volume IV, "Other Institutional ES&H Documents"
- Volume V, "Category II and III Nuclear Facility Requirements"
- Volume VI, "Nevada Requirements"

Volume I of the Manual contains Document 2.1, "Laboratory and ES&H Policies, General Worker Responsibilities, and Integrated Safety Management," and Document 2.2, "Managing ES&H for LLNL Work." Document 2.1 describes the general responsibilities of LLNL management and workers, subcontractors, and federal and local agencies with regard to work conducted at the Laboratory. Document 2.2 describes how work is to be performed based on LLNL's Integrated Safety Management System (ISMS).

Volume II contains the majority of the documents that previously made up the *Health & Safety Manual*. A few documents (e.g., Document 41.3, "Suspect/Counterfeit Items") have been moved to other volumes where they more logically fit within the new scheme of the Manual. The documents in Volume II give both general (e.g., Document 11.1, "Personal Protective Equipment") and specific (e.g., Document 14.6, "The Safe Handling of Fluorine") requirements for Laboratory work activities. They also include specific responsibilities for the work activity they describe. Other documents, such as Document 14.13, "Pesticide Management" (previously in the *Environmental Compliance Manual*), have been moved into Volume II.

Volume III contains documents with controls designed to protect the environment and includes a majority of the *Environmental Compliance Manual* and its guidance documents.

Volume IV contains ES&H-related documents such as Document 41.1, "LLNL Quality Assurance Program", Document 40.1, "LLNL Training Program Manual," and Document 40.2, "Environment Safety & Health Training and Education" which are not included in other volumes.

Volume V contains documents specific to nuclear facilities and related activities, including several documents of the *ES&H Manual* [e.g., Document 51.2, "Technical Safety Requirements"; Document 51.1, "Safety Analysis Reports for Category II and III Nuclear Facilities," and Document 51.4, "Start-up and Restart of Nuclear Facilities"].

Volume VI contains requirements specific to LLNL's operations and work activities in Nevada. These requirements, unless otherwise stated, take precedence over parallel, but non-Nevada specific, requirements that might be found in other volumes of this Manual.

## 4.0 Revisions to the *ES&H Manual*

ES&H requirements and policies from external and internal sources that may be applicable to Laboratory work activities are reviewed for possible incorporation into the Manual. The Manual is revised on an on-going basis to ensure incorporation of requirements from the most current set of WSS and LLNL policies. Employees shall use the official on-line version of the Manual to ensure that they are following the latest requirements and policies. The LLNL Deputy Director for Operations officially approves the documents included in the *ES&H Manual*. A few documents in the Manual must also be approved by the DOE, e.g., Document 41.1 and Document 4.3, "Occurrence Reporting and Processing of Operations Information."

All new and revised requirements in the Manual include a title page bearing the signature of the Deputy Director for Operations and the date that it was approved for implementation. In the on-line version of the Manual, there is a notation before each document of whether it is new or contains a major or minor revision. These terms are defined as follows:

- **New Document** is an entirely new document (i.e., never before issued).
- **Major Revision** denotes a significant change (s) to the content of the document that is dictated by new or revised requirements or methods for their implementation.

- **Minor Revision** denotes a minor change(s) to the requirements or methods of implementation in the document or may involve updating information (such as names, phone numbers) or improving clarity of the document.

Limited text changes (minor revisions) to documents are denoted by traditional change bars in the Adobe Acrobat PDF version of each document. HTML coding does not allow for change notations in the HTML version.

## 5.0 Criteria for Inclusion of Documents into the *ES&H Manual*

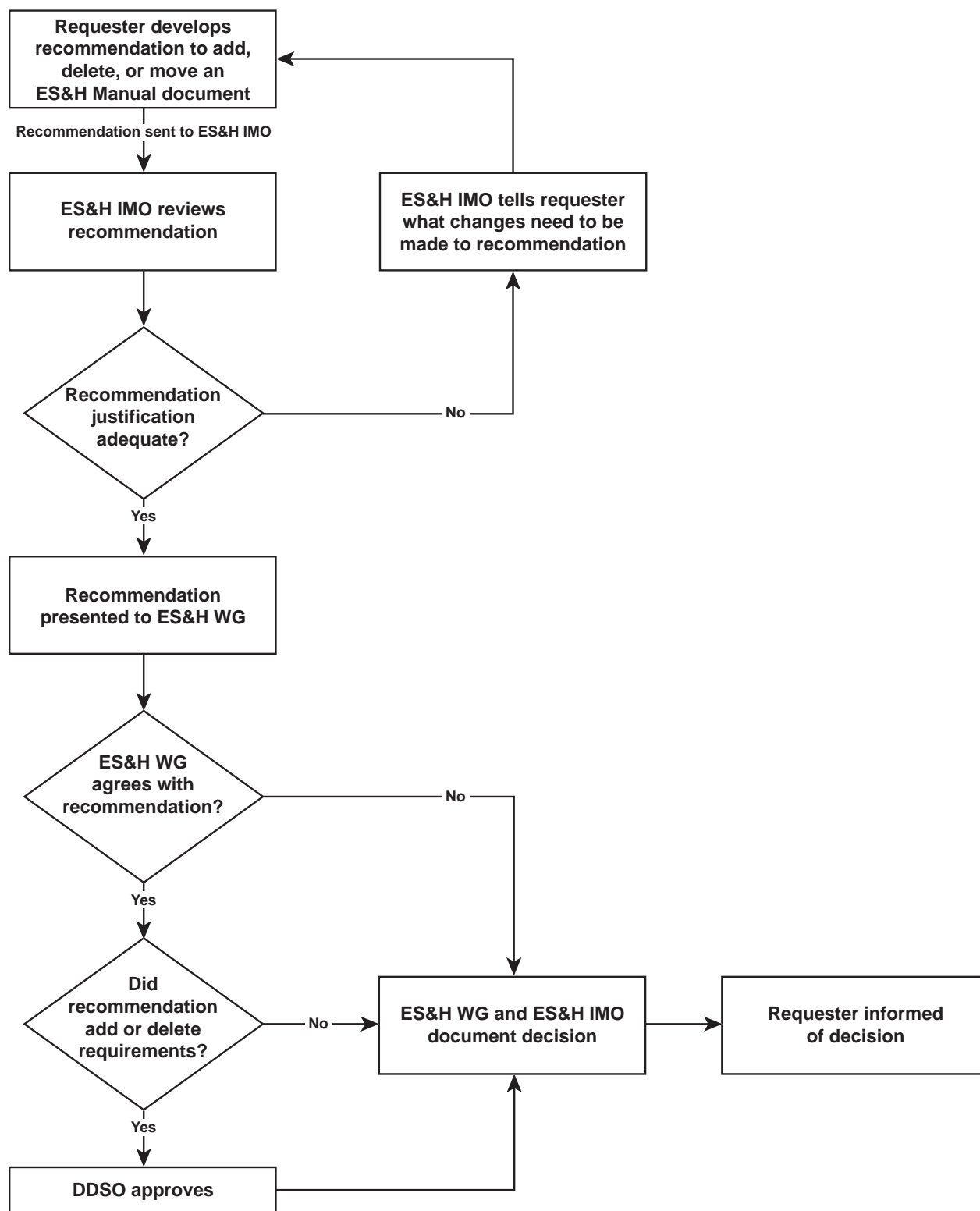
Documents should be included in the *ES&H Manual* if:

- They contain requirements that will be implemented by more than one directorate,

OR

- Directorates are assigned specific implementation responsibilities in the document.

When a request is made to add or delete a document to/from the *ES&H Manual*, the Document Manager will make a recommendation based on the above guidance criteria and present it to the ES&H Working Group for approval. If the change involves the addition or deletion of a WSS requirement, the request shall also go before the Deputy Director for Operations (DDO) for approval. See flowchart next page.

**Recommendation to add, delete, or move an ES&H Manual document**



## **6.0 Additional Information about the *ES&H Manual***

More information about the Manual can be obtained from the Safety Programs Division in the Hazards Control Department or as applicable the LLNL-Nuclear Test Organization (NTO) at the Nevada Test Site.

## **7.0 Implementation Schedule for *ES&H Manual* Documents**

New and revised documents in the *ES&H Manual* are to be implemented within 60 days of the date they are placed on the web unless otherwise stated within the document. This requirement becomes effective for *ES&H Manual* documents with web dates later than September 1, 2000.